Title: Missing Number Story Structure

Brief Overview:

The students will use prior knowledge of solving addition and subtraction word problems and story structure (stories have a beginning, middle and end) to support them in solving word problems with a missing number (start or change).

NCTM Content Standard/National Science Education Standard:

Algebra, Patterns and Functions

Grade/Level:

Grades 1-2

Duration/Length:

3 days (60 minutes per day)

Student Outcomes:

Students will:

- Recognize the structure of a word problem (start=beginning, change=middle, result=end)
- Develop a number sentence with a missing number based on a word problem (focus on start [beginning] and change [middle])
- Demonstrate how they solve equations using words or pictures and numbers (explain their thinking)
- Determine a solution for a word problem

Materials and Resources:

FOR ALL LESSONS:

- Teacher Background Pages (Teacher Resource 1a-d)
- 10 small manipulatives for each student (bears, beans, macaroni…)

FOR LESSON 1:

- Fairy Tale Word Problems, cut out on dotted lines (Teacher Resource 2a-b)
- T-Chart (enlarge the one below onto 11 X 17 or larger paper or create one a poster/construction paper) (Teacher Resource 3)
- Addition and subtraction label cards for t-chart, cut out on dotted lines (Teacher Resource 4)
- Change Unknown Preassessment (Student Resource 1)
- Change Unknown Preassessment Answer Key (Teacher Resource 5)
- Change Unknown Word Problems (Teacher Resource 6a-d)
- Change Unknown Practice (Student Resource 2a-b)
- Change Unknown Practice Answer Key (Teacher Resource 7a-b)
- Change Unknown Exit Card (Student Resource 3)

- Change Unknown Exit Card Answer Key (Teacher Resource 8)

FOR LESSON 2:

- Start Unknown Preassessment (Student Resource 4)
- Start Unknown Preassessment Answer Key (Teacher Resource 9)
- Start Unknown Word Problems (Teacher Resource 10a-d)
- Start Unknown Practice (Student Resource 5a-b)
- Start Unknown Practice Answer Key (Teacher Resource 11a-b)
- Start Unknown Exit Card (Student Resource 6)
- Start Unknown Exit Card Answer Key (Teacher Resource 12)

FOR LESSON 3:

- Number Sentence Match Number Sentences (Teacher Resource 13)
- Number Sentence Match Word Problem (Teacher Resource 14)
- Brainstorming: How Would You Solve It? (Teacher Resource 15)
- Set of 5 Missing Number Team Challenge cards, 1 set per group of students (Student Resource 7a-e)
- Set of 5 Missing Number Team Challenge cards, 1 set per group of students (Teacher Resource 16a-e)

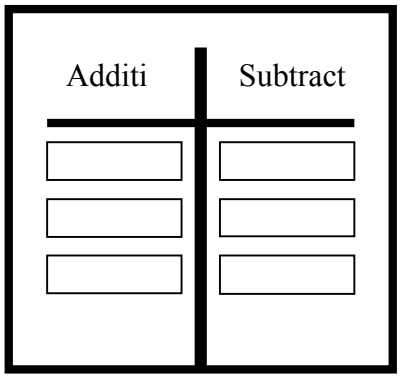
FOR SUMMATIVE ASSESSMENT:

- Missing Number Story Structure Assessment (Student Resource 8a-d))
- Missing Number Story Structure Assessment Answer Key (Teacher Resource 17a-c)

Development/Procedures:

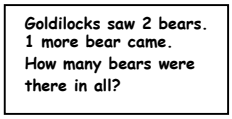
Lesson 1

- Preassessment #1- This concept attainment activity will assess students' ability to identify simple word problems as addition or subtraction problems. *(Refer to Teacher Resource 1a-d, the Teacher Background pages, which explain the number sentence descriptors in relation to the story structure descriptors and gives examples of each type of word problem.)*



To begin this whole class activity, the display a T- chart (Teacher Resource 3) with the Addition and Subtraction Label Cards placed at the top (Teacher Resource 4). The teacher will read the six word problems to the students – one at a time *(Cut out the word problems in Teacher Resource 2a and 2b to display on the concept attainment chart)*. After each word problem is read, the class will discuss each problem and decide whether the problem can be solved using addition or subtraction. The students can respond with a thumbs-up if they think that the example can be solved using addition, or thumbs-down if they think subtraction can be used to solve the problem. The problem will then be placed under the correct heading on the t-chart. There are three examples of each type of problem.

For example: Read the first problem to the students. Then ask: "What type of problem is this? Is it an addition problem, or a subtraction problem? Explain your choice." The students should say that it is an addition problem. They should support their answer by saying that there were two bears and then one more bear was added so now there are three bears in all. Any similar response is acceptable.



- Preassessment #2 - The students will receive addition and subtraction word problems to solve individually *(Distribute Student Resource 1)*. These problems will assess each student's ability to solve more complex addition and subtraction word problems and to write an equation to represent the solution to each problem. These problems are not a review of addition and subtraction concepts previously taught as in the first preassessment. The problems presented in this assessment have the missing information (number) in the middle of the problem. This missing information represents a change in the problem. There is also a traditional word problem mixed into the set where the missing number is the sum or difference at the end of the problem. These problems assess the concepts to be taught in the ensuing lessons.

- Launch- In this whole class activity, the students will explore the concept of *change unknown* within addition and subtraction word problems. Begin this portion of the lesson with a dialog similar to the one below:

  "Math word problems or math stories have a beginning, middle, and an end just like other stories. In most of the math word problems that you have solved in the past, we find the sum or the difference to the problem, which is like the ending to a story."

  "Here's a sample word problem where you have to solve for the sum and find an ending to the story. Ivan had two cookies. His sister Julia gave him one more cookie. How many cookies does Ivan have now? This word problem is missing an ending. To solve it, we must add the number of cookies Ivan had altogether to find the sum (2+1=3). Can someone give me an example of this type of word problem?"

  (*Allow the students to provide a few examples.)*

  "Today we are going to learn how to solve addition and subtraction word problems that contain information telling about the beginning and the end of the story, but information about what happens in the

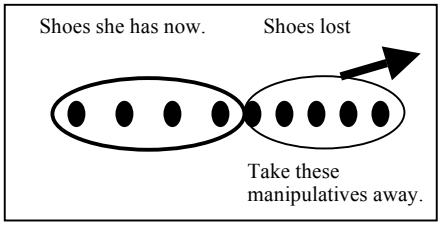
middle is missing. This missing information tells about something that has changed in the story. To explore these types of problems today, we will have some fun acting out a few of these problems in order to solve them."

Guide the students in solving the problem through role-play. Use the addition and the subtraction problems provided in Teacher Resource 6.

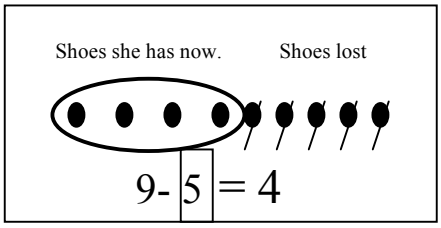
- Teacher Facilitation – Give each student ten small manipulatives to use for today's lesson. Use the same word problems presented in the *Launch* to model how to solve the problems.

  First, through guided practice, model how to concretely solve the problem using manipulatives on the overhead.

  Cinderella had 9 shoes. Some shoes were lost. Now she has 4. How many shoes did she lose?



  Then, give each student a piece of drawing paper and model how to solve the problems pictorially.



  On the same paper as the drawing, guide the students in developing a number sentence for each problem. Take the students through the concrete, pictorial, and abstract levels for solving the first problem – before beginning the second problem.

  There are 9 shoes in the beginning. 9
  Some shoes are lost in the middle. - □
  She has 4 shoes at the end. 4

- Student Application –Distribute Student Resource 2 to each student. The students have four change unknown word problems to solve on their own pictorially, two addition and two subtraction. They need to write a number sentence for each problem. Allow the students to use their manipulatives to work through the problem before they draw their pictures. Although the students should each complete their own work, have the students work in pairs to solve their problems. Having students work with a partner will foster math communication and cooperative learning.

- Embedded Assessment –Distribute Student Resource 3 to each student. The students will solve one change unknown word problem on an exit card as an assessment for today's lesson. The students may use manipulatives to help them solve the problem. However, the students must draw a picture to show how they solved the problem and write a number sentence for the problem.

- Reteaching/Extension –
  - For those who have not completely understood the lesson:
    - Provide small group instruction on the concept using manipulatives or additional dramatization.
  - For those who have understood the lesson:
    - Provide additional word problems with larger numbers.
    - Have them create and solve their own word problems.
    - Have the students explain how they solved a word problem using words and pictures in their math journal.

Lesson 2

- Preassessment – *(Distribute Student Resource 4)* The students will receive addition and subtraction word problems to solve individually. These problems will assess each student's ability to solve have the missing information (number) at the start of the problem as well as a traditional word problem with the missing number at the end of the problem. These problems preassess the concepts to be taught in the ensuing lessons.

- Launch- In this whole class activity, the students will explore the concept of *start/unknown* within addition and subtraction word problems. Begin this portion of the lesson with a dialog similar to the one below:

  "Yesterday we discussed that math word problems or math stories have a beginning, middle, and an end just like other stories. We explored how to solve word problems where the middle of the problem or story is

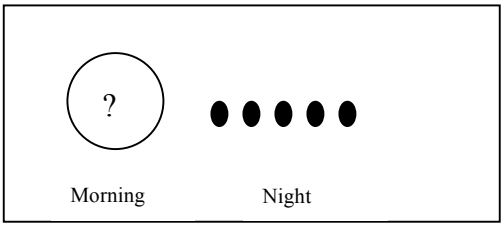
missing. Today, we are going to learn how to solve addition and subtraction word problems that contain information telling about the middle and the end of the story, but information about what happens in the beginning of the story is missing. This missing information tells about something in the beginning of the story. To explore these types of problems today, we will again act out a few of these problems in order to solve them."

Guide the students in solving the problem through role play. Use the addition and the subtraction problems provided in the Teacher Resource 10 of the lesson.

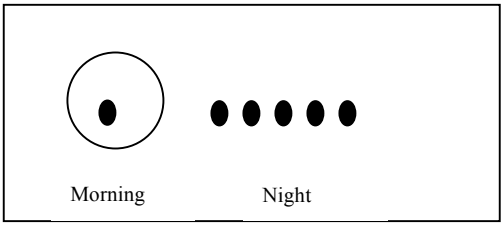
- Teacher Facilitation – Give each student ten small manipulatives to use for today's lesson. Use the same word problems presented in the *Launch* to model how to solve the problems.

  First, through guided practice, model how to concretely solve the problem using manipulatives on the overhead.

  "Here is a sample word problem again:
  Snow White sang songs in the morning. Then, she sang 5 more songs at night. She sang 6 songs in all. How many songs did she sing in the morning?"



  Since the total number of songs she sang was 6, add 1 manipulative to represent the 1 song sang in the morning. The missing number is equal to 1, thus, 1 + 5 = 6.

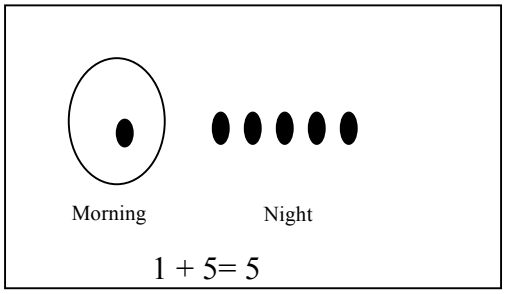


Then, give each student drawing paper (or today's worksheet) and model how to solve the problems pictorially. The drawing will look the same as the illustration above.

On the same paper as the drawing (or today's worksheet), guide the students in developing a number sentence for each problem. Take the students through the concrete, pictorial, and abstract levels for solving the first problem – before beginning the second problem.

Some songs were sung in the morning.
5 songs were sung at night.
She sang 6 songs in all.

? + 5 = 6
6 – 5 = 1



- Student Application – Distribute Student Resource 5 to each student. The students have four start unknown word problems to solve on their own pictorially, two additions and two subtractions. They need to write a number sentence for each problem. Allow the students to use their manipulatives to work through the problem before they draw their pictures. Although the students should each complete their own work, have the students work in pairs to solve their problems. Having students work with a partner will foster math communication and cooperative learning.

- Embedded Assessment – Distribute Student Resource 6 to each student. The students will solve one start unknown word problem on an exit card as an assessment for today's lesson. The students may use manipulatives to help them solve the problem. However, the students must draw a picture to show how they solved the problem and write a number sentence for the problem.

- Reteaching/Extension –

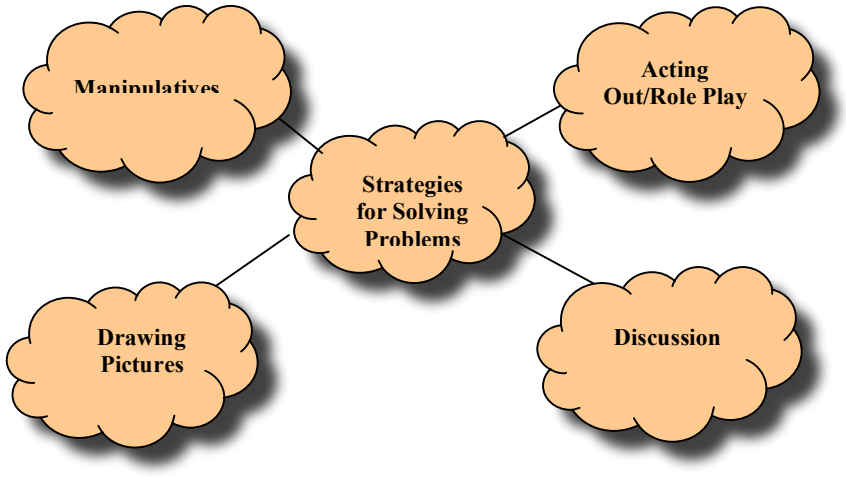
    - For those who have not completely understood the lesson:
        - Provide small group instruction on the concept using manipulatives or additional dramatization.
    - For those who have understood the lesson:
        - Provide additional word problems with larger numbers.
        - Have them create and solve their own word problems.

- Have the students explain how they solved a word problem using words and pictures in their math journal.

Lesson 3

- Preassessment – Number Sentence Match Word Problems and Number Sentences. Read aloud and show the word problem to students: "The Little Mermaid found some white shells. Then, she found 2 pink shells. Now she has 7 shells. How many white shells did she find?" (Teacher Resource 14). Then, show the students the two number sentences; __ + 2 = 7, 7 - __ = 2 (Teacher Resource 5). Ask students to choose which of the two number sentences shows what is happening in the word problem and why (support their choice) using a think-pair-share model. Ask students to think about: What do you already know (start, change, result)? Which part of the word problem is unknown (start, change, result)? Students should say that the number sentence that shows what is happening in the word problem is ___ + 2 = 7 because the start (beginning) or white shells are what is unknown, but we do know what changes (middle) or the number of pink shells and the result (end) or total shells. Other logical responses should be accepted. Briefly, draw a conclusion to the discussion as a class.

- Launch – Brainstorming: How Would You Solve It?
  Explain to students that they will be playing a game in small groups to solve addition and subtraction word problems with missing numbers, but before playing they will need to think about the strategies they have learned, which will help them to solve problems in the game. Show students the word problem; "The smart pig had some bricks. He used 1 brick. Now he has 5 bricks. How many bricks did he start with?" (Teacher Resource 15) and ask them how they would go about solving it. Ask questions such as: How can you show/record the information you know? How will you figure out what is known and unknown (the missing number)? Record student strategy ideas on a simple web drawn on chart paper or on the chalkboard The students should state that they can solve problems by using manipulatives, drawing pictures, acting out the problem…(some possible student responses are listed on an example web below but more detail can be added such as types of manipulatives.).



- Teacher Facilitation – Divide the class into small groups of 3 or 4 students. Explain the rules to the directions for the game *Missing Number Team Challenge!*
    1. Each team will have the opportunity to solve as many as 5 addition/subtraction word problems (Student Resource 7) with missing numbers in 20 minutes.
    2. The members of each team must work together using their strategies (Refer them to the web they just created if they get "stuck.") to solve each problem.
    3. After solving a problem, students in each group will show their solution to the teacher. If their work (picture, number sentence…) and solution are correct they will earn a point and have an opportunity to solve another problem. If the problem is incorrect, the team does not go on to the next problem, but must try again to solve it correctly.
    4. Every team has the opportunity to earn 5 points. The team(s) with the most points at the end of 20 minutes wins the game.

- Student Application - The students play the game, *Missing Number Team Challenge,* for 20 minutes using the problem-solving strategies that they have learned.

- Embedded Assessment – The problem solutions that each team turns in can serve as a team assessment for today's class activity.

- Reteaching/Extension –
    - For those who have not completely understood the lesson:
        - Provide small group instruction on the concept using manipulatives or additional dramatization.
    - For those who have understood the lesson:
        - Provide additional word problems with larger numbers.
        - Have them create and solve their own word problems.
        - Have the students explain how they solved a word problem using words and pictures in their math journal.

Summative Assessment:

Teachers will be able to determine student progress towards understanding the concept of solving addition and subtraction equations with missing numbers in the context of problem solving situations through this summative assessment. Distribute the student assessment (Student Resource 8).

This unit addresses the NCTM Pre-K-2 Algebra Standard: Use mathematical models to represent and understand quantitative relationships. The expectation is that the students will model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols. It partially addresses one of the Maryland State Department of Education's Voluntary State Curriculum outcomes for Grade 2 – Identify, write and solve equations …

The students will have five word problems to solve. The items have an open response format for a brief constructed response. The assessment will include addition and subtraction word problems that have missing numbers representing the start unknown, change unknown, and result unknown. For each problem, the students must use words, numbers or pictures to show how they found the solution to the problems. The items are representative of the following types of addition and subtraction problems:

- Addition – missing number at the start of the addition problem
- Addition – missing number (in the middle) that reflects a change in the addition problem
- Subtraction – missing number at the start of the subtraction problem
- Subtraction – missing number (in the middle) that reflects a change in the subtraction problem
- Subtraction – missing number (at the end) as the result of the subtraction problem.

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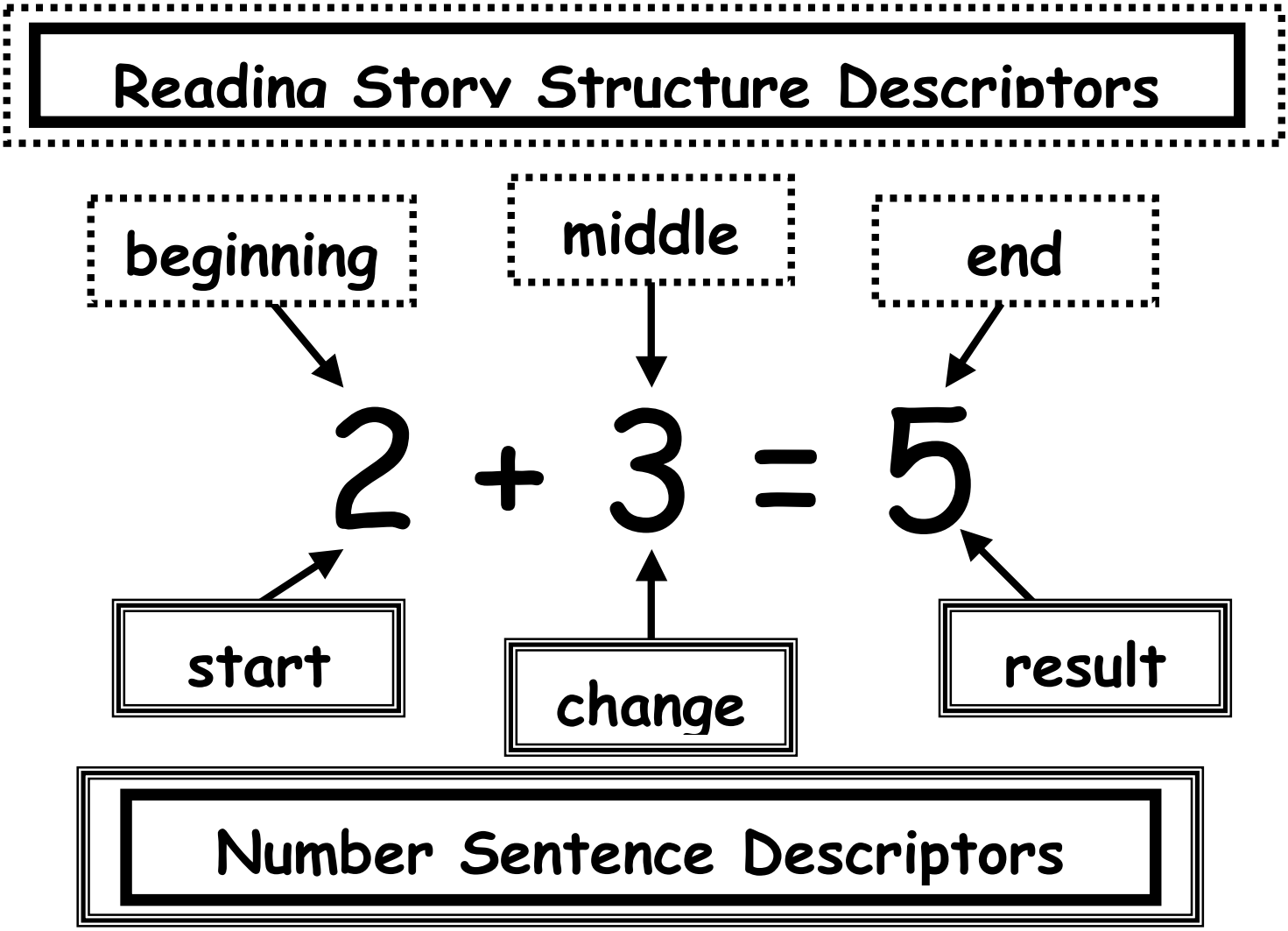
Teacher Background Pages

NUMBER SENTENCE (addition for problems that follow):



****Number Sentence for Subtraction would be 5-3= 2.**

Teacher Resource 1b

TYPES OF WORD PROBLEMS:

RESULT (END) UNKNOWN WORD PROBLEM (finding the sum/difference):

Addition:

The Frog Prince had 3 balls.
He got 2 more balls.
How many balls does he have now?

Subtraction:

The Frog Prince had 5 balls.
He lost 3 balls.
How many balls does he have left?

START (BEGINNING) UNKNOWN WORD PROBLEMS:

Addition:

The Frog Prince had some balls.
He got 2 more balls.
Now he has 5 balls.
How many balls did he have to start?

Subtraction:

The Frog Prince had some balls.
He lost 3 balls.
Now he has 2 balls.
How many balls did he start with?

CHANGE (MIDDLE) UNKNOWN WORD PROBLEMS:

Addition:

The Frog Prince had 3 balls.
He got some more balls.
Now he has 5 balls.
How many balls did he get?

Subtraction:

The Frog Prince had 5 balls.
He lost some balls.
Now he has 2 balls.
How many balls did he lose?

Fairy Tale Word Problems

Goldilocks saw 2 bears.
1 more bear came.
How many bears were there in all?

Cinderella cleaned 5 rooms.
Then, she cleaned 3 more.
How many rooms did she clean altogether?

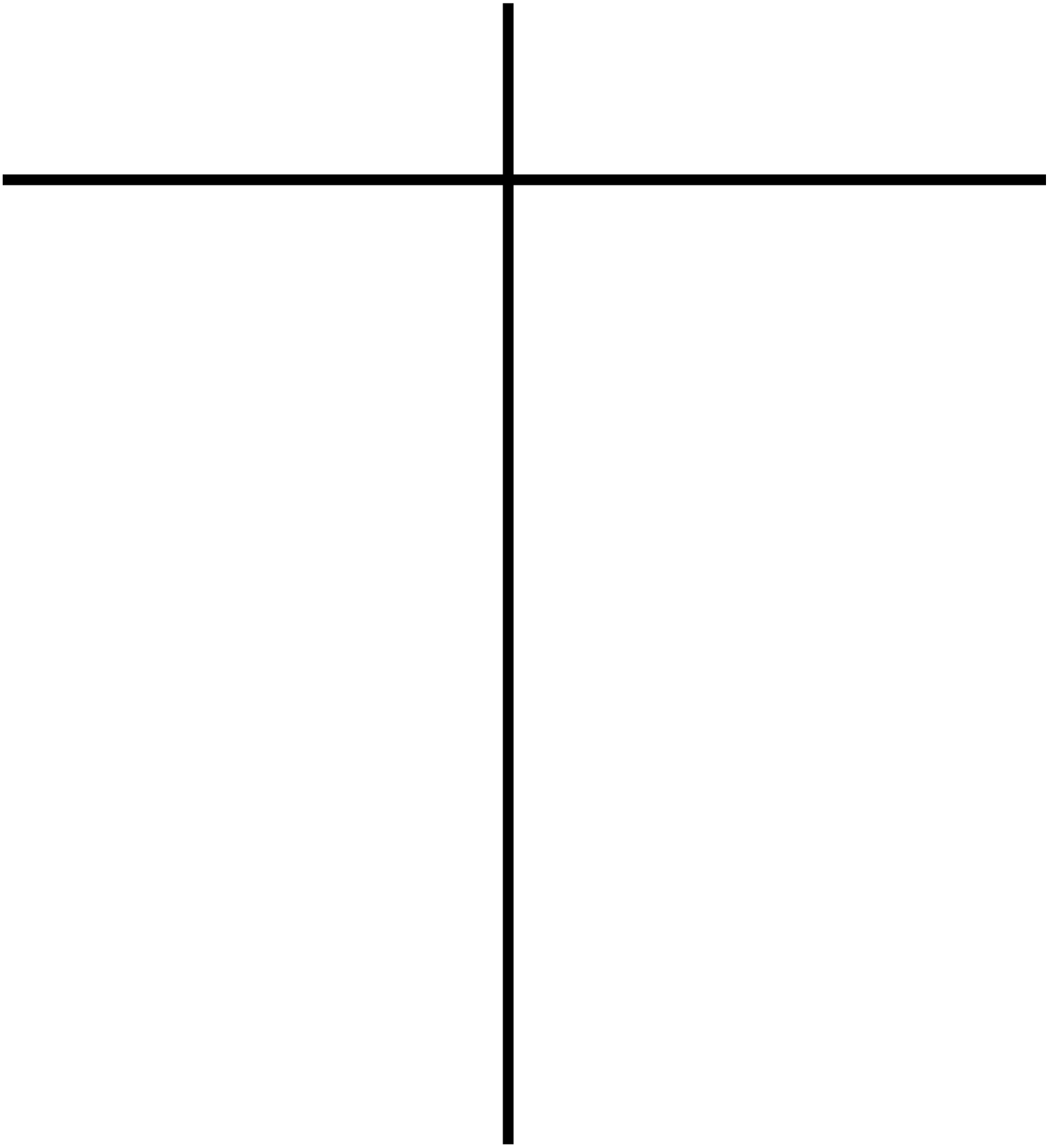
Hansel put down 3 breadcrumbs.
Gretel put down 6 breadcrumbs.
How many breadcrumbs did they put down in all?

Rumpelstiltskin had 4 names.
The queen guessed 3 names.
How many names were left?

Red Riding Hood had 7 apples.
She lost 4 in the forest.
How many apples does she have now?

3 pigs made a house.
The wolf ate 2 pigs.
How many pigs were left?

T-Chart



Addition and Subtraction Label Cards

addition

subtraction

Name_____ Date_____

Change Unknown Preassessment

Use words, pictures or NUMBERS to show your answer.

1. 7 dwarfs were at home with Snow White.
   6 dwarfs went to work.
   How many dwarfs were left?

2. Rapunzel's hair was 8 inches long.
   Then, it grew.
   Now, it is 10 inches long.
   How many inches did it grow?

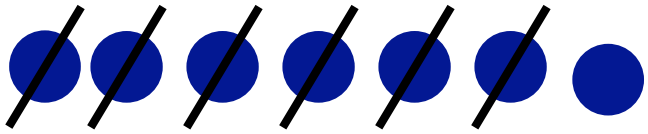
Name_____ Date_____

Change Unknown Preassessment

Answer Key

Use words, pictures or NUMBERS to show your answer.

1. 7 dwarfs were at home with Snow White.
   6 dwarfs went to work.
   How many dwarfs were left?



I counted 7 counters and then I took 6 away.
1 counter was left.

$7 - 6 = 1$

2. Rapunzel's hair was 8 inches long.
   Then, it grew.
   Now, it is 10 inches long.
   How many inches did it grow?

I counted 8 counters.
Then I added counters until I had a total of 10 counters. I only had to add 2 more counters.

$8 + 2 = 10$

Change Unknown Word Problems

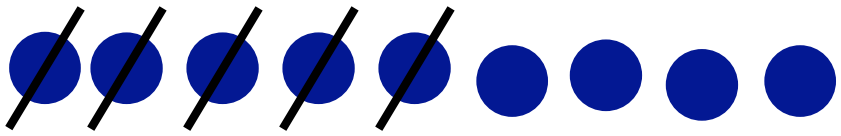
Cinderella had 9 shoes. Some shoes were lost. Now she has 4. How many shoes did she lose?

Change Unknown Word Problems

Cinderella had 2 white socks. Then, she washed some red socks. She washed 9 socks in all. How many red socks did she wash?

Change Unknown Word Problems
Answer Key

Cinderella had 9 shoes. Some shoes were lost. Now she has 4. How many shoes did she lose?



I counted 9 counters.
I took away counters until I had 4 counters left.
I took away 5 counters.

$9 - 5 = 4$

Change Unknown Word Problems
Answer Key

Cinderella had 2 white socks. Then, she washed some red socks. She washed 9 socks in all. How many red socks did she wash?

I counted 2 counters.
I added counters until I had 9 counters.
I had added 7 counters.

$2 + 7 = 9$

Name_____ Date_____


Change Unknown Practice

Use words, pictures or NUMBERS to show your answer.

1. Jack had 6 cows.
   He sold some cows.
   Then, he had 1 cow.
   How many cows did he sell?

2. Hansel got 10 pieces of candy.
   Gretel ate some of the candy.
   Then, they had 3 pieces of candy.
   How many pieces of candy did Gretel eat?

3. Rapunzel saw 1 blue bird.
   Then, she saw some red birds.
   She saw 10 birds in all.
   How many red birds did she see?

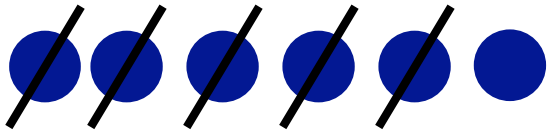
4. Rumpelstiltskin did 4 fast dances.
   Then, he did some slow dances.
   He did 10 dances in all.
   How many slow dances did he do?

Name_____ Date_____

Change Unknown Practice

Use words, pictures or NUMBERS to show your answer.

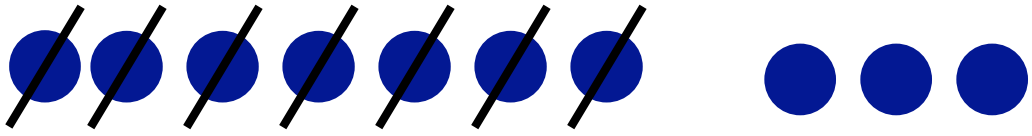
1. Jack had 6 cows.
   He sold some cows.
   Then, he had 1 cow.
   How many cows did he sell?



I counted 6 counters.
I took away counters until I had 1 counter left.
I took away 5 counters.

$6 - 5 = 1$

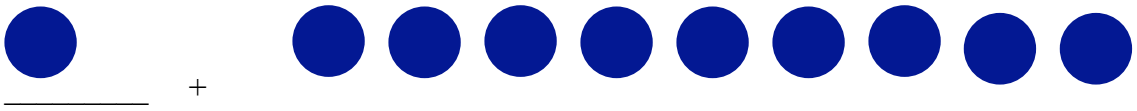
2. Hansel got 10 pieces of candy.
   Gretel ate some of the candy.
   Then, they had 3 pieces of candy.
   How many pieces of candy did Gretel eat?



I had 10 counters.
I took away counters until I had 3 counters left.
I took away 7 counters.
I counted 7 counters and then I took 6 away. 1 counter was left.

$10 - 7 = 3$

3. Rapunzel saw 1 blue bird.
   Then, she saw some red birds.
   She saw 10 birds in all.
   How many red birds did she see?



_____ +

I had 1 counter.
Then I added counters until I had 10 counters.
I had added 9 counters.

$1 + 9 = 10$

4. Rumpelstiltskin did 4 fast dances.
   Then, he did some slow dances.
   He did 10 dances in all.
   How many slow dances did he do?

_____ +

I had 4 counters.
Then I added counters until I had 10 counters.
I had added 6 counters.

$4 + 6 = 10$

Name_____ Date_____

Change Unknown Exit Card

Use words, pictures or NUMBERS to show your answer.

1. The Gingerbread Boy ran away fro m 3 boys.
   Some girls ran, too.
   Now there are 10 kids running after him.
   How many girls ran after the Gingerbread Man?

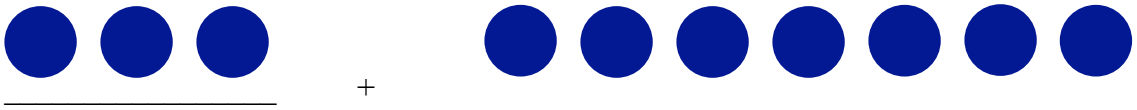
Teacher Resource 8

Name_____ Date_____

Change Unknown Exit Card

Use words, pictures or NUMBERS to show your answer.

1. The Gingerbread Boy ran away fro m 3 boys.
   Some girls ran, too.
   Now there are 10 kids running after him.
   How many girls ran after the Gingerbread Man?



_____ +

I counted 3counters.
Then I added more counters until I had a total of 10 counters. I added 7 counters. There are 7 girls running after the Gingerbread Man.

$3 + 7 = 10$

Name_____ Date_____

Start Unknown Preassessment

Use words, pictures or NUMBERS to show your answer.

1. The goose had 4 golden eggs.
   Then, she laid 4 more eggs.
   How many eggs does she have in all?

2. Jack had some beans.
   Then he lost 5 beans.
   Now, he has 0 beans.
   How many beans did he start with?

Name_____ Date_____

Start Unknown Preassessment

Answer Key

Use words, pictures or NUMBERS to show your answer.

1. The goose had 4 golden eggs.
   Then, she laid 4 more eggs.
   How many eggs does she have in all?

_____ +

I took out 4 counters. Then I added 4 more counters. Finally, I counted how many counters I had altogether.

4 + 4 = 8

2. Jack had some beans.
   Then he lost 5 beans.
   Now, he has 0 beans.
   How many beans did he start with?

I worked backwards to solve this problem. I began to solve the problem by having 0 counters in front of me, since there were no counters at the end of the story. I added 5 counters to show the beans that were lost in the middle of the story. Then, I knew Jack had 5 counters at the beginning of the story (before the beans were lost).

0 + 5 = 5

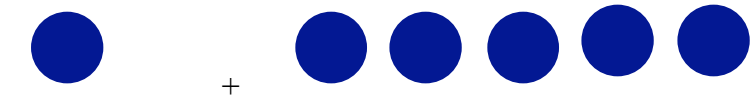
Start Unknown Word Problems

Snow White sang some songs in the morning. Then, she sang 5 more songs at night. She sang 6 songs in all. How many songs did she sing in the morning?

Beauty read some long books. Then, she read 3 short books. She read 5 books in all. How many long books did she read?

Start Unknown Word Problems

Snow White sang some songs in the morning. Then, she sang 5 more songs at night. She sang 6 songs in all. How many songs did she sing in the morning?



_____ +

I had 5 counters. Then, I added counters until I had 6. I added 1 counter.

1+ 5 = 6

Beauty read some long books. Then, she read 3 short books. She read 5 books in all. How many long books did she read?

Name_____ Date_____

Use words, pictures and NUMBERS to show your answer.

1. The fox ate some gingerbread boys.
   Then, he ate 6 gingerbread girls.
   He ate 8 gingerbread people in all.
   How many gingerbread boys did he eat?

2. The first pig got some sticks by a tree.
   Then, he got 3 more sticks by the pond.
   He had 3 sticks in all.
   How many sticks did he get by the tree?

3. The Little Red Hen had some friends.
   1 friend went home.
   1 friend was left.
   How many friends did she start with?

4. The Little Mermaid had some fish.
   7 fish swam away.
   She has 0 fish now.
   How many fish did she have to start with?

Name_____ **Date**_____

Use words, pictures and NUMBERS to show your answer.

1. The fox ate some gingerbread boys.
   Then, he ate 6 gingerbread girls.
   He ate 8 gingerbread people in all.
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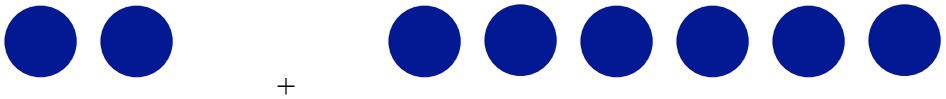


_____ +

I had 6 counters. Then, I added counters until I had 8 counters. I added 2 counters.

$2 + 6 = 8$

2. The first pig got some sticks by a tree.
   Then, he got 3 more sticks by the pond.
   He had 3 sticks in all.
   How many sticks did he get by the tree?

_____ +

I had 3 counters. Then, I added counters until I had 3 counters. I added 0 counters

$0 + 3 = 3$

3. The Little Red Hen had some friends.
   1 friend went home.
   1 friend was left.
   How many friends did she start with?

\+ _____

I had 1 counter. I added 1 counter to show the friend that went home. I worked backwards to show that there were 2 friends at the beginning of the story.

1 + 1 = 2

4. The Little Mermaid had some fish.
   7 fish swam away.
   She has 0 fish now.
   How many fish did she have to start with?

I worked backwards to solve the problem. I had 0 counters. I added 7 counters to show the 7 fish that swam away. There were 7 counters at the beginning of the story.

0 + 7 = 7

Name_____ Date_____

Start Unknown Exit Card

Use words, pictures or NUMBERS to show your answer.

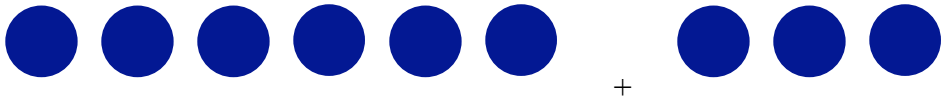
1. The Gingerbread Boy ran away from some big animals.
   He ran away from 6 little animals.
   He ran away from 9 animals in all.
   How many big animals did he run away from?

Name_____ **Date**_____

Start Unknown Exit Card

Use words, pictures or NUMBERS to show your answer.

1. The Gingerbread Boy ran away from some big animals.
   He ran away from 6 little animals.
   He ran away from 9 animals in all.
   How many big animals did he run away from?



\+ _____

I had 6 counters. I added counters until I had 9 counters. I added 3 counters.

$6 + 3 = 9$

Number Sentence Match Number Sentences

___ + 2 = 7

7 - ___ = 5

Number Sentence Match Word Problem

The Little Mermaid found some white shells. Then she found 2 pink shells. Now she has 7 shells. How many white shells did she find?

Brainstorming: How Would You Solve It?

The smart pig had some bricks. He used 1 brick. Now he has 5 bricks. How many bricks did he start with?

Missing Number Team Challenge

Baby Bear had 7 toys. He broke 3. How many toys does he have left?

Missing Number Team Challenge

Mama Bear had some bowls. Baby Bear gave her 1 bowl. Then, she had 5 bowls. How many bowls did she start with?

Missing Number Team Challenge

Papa Bear had some chairs. He broke 9 chairs. He had 0 chairs left. How many chairs did he have to start with?

Student Resource 7d

Missing Number Team Challenge

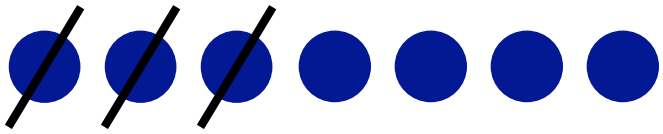
Goldilocks sat on 4 big beds. Then, she sat on some little beds. She sat on 6 beds in all. How many little beds did she sit on?

Missing Number Team Challenge

Goldilocks got 10 flowers for the bears. She lost some flowers. Now she has 5 flowers. How many flowers does she have left?

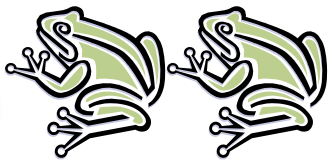
Missing Number Team Challenge

Baby Bear had 7 toys. He broke 3. How many toys does he have left?

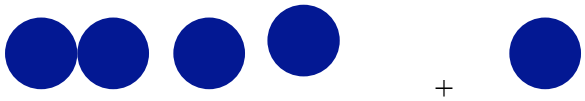


I had 7 counters. I took away 3 counters. We had 4 counters left. 7 – 3 = 4

Missing Number Team Challenge



Mama Bear had some bowls. Baby Bear gave her 1 bowl. Then, she had 5 bowls. How many bowls did she start with?



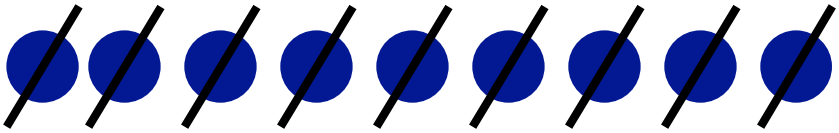
_____ +

We had 1 counter. Then, we added counters until we had 5 counters. We added 4 counters.

4 + 1 = 5

Missing Number Team Challenge

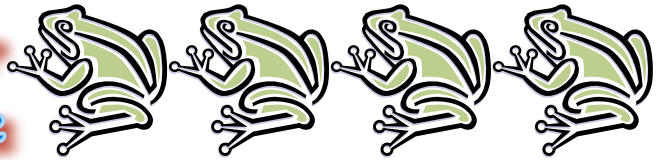
Papa Bear had some chairs. He broke 9 chairs. He had 0 chairs left. How many chairs did he have to start with?



We had 0 counters. We added counters to show the chairs that got broken. We added 9 counters.

9 – 9 = 0

Missing Number Team Challenge



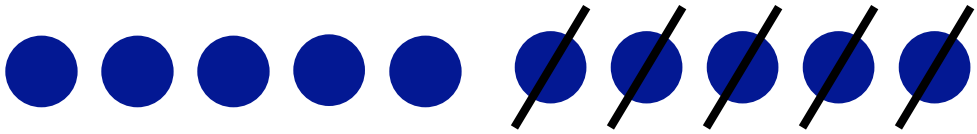
Goldilocks sat on 4 big beds. Then, she sat on some little beds. She sat on 6 beds in all. How many little beds did she sit on?

We had 4 counters. We added counters until we had 6 counters. We added 2 counters.

$4 + 2 = 6$

Missing Number Team Challenge

Goldilocks got 10 flowers for the bears. She lost some flowers. Now she has 5 flowers. How many flowers does she have left?

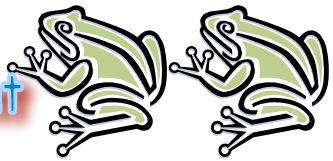


We had 10 counters. We took away counters until we had 5 counters. We took away 5 counters.

10 – 5 = 5

Name_____ Date_____

Missing Number
Story Structure Asessment



Use words, pictures or numbers to show your answer.

1. The Ugly Duckling had some feathers.
   Then, he got 4 more.
   He had 10 feathers in all.
   How many feathers did he have to start with?

2. The elves made 3 shoes in the day.
   Next, they made some more at night.
   They made 6 shoes in all.
   How many shoes did they make at night?

3. The fisherman caught 10 fish.
   His wife ate 1 fish.
   How many fish do they have left?

4. Puss got 7 boots.
   He gave away some boots.
   Now, Puss has 4 boots.
   How many did he give away?

5. Beauty bought some roses.
   She gave 1 to Beast.
   Now she has 6 roses.
   How many roses did she have to start with?

CHALLENGE: Write your own word problem with a missing number like the ones you have been learning to solve using the graphic organizer. Then, have a friend try to solve it!

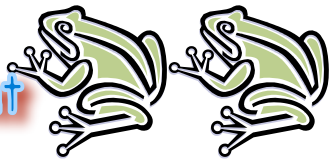
Start (beginning):

Change (middle):

Result (end)

Name_____ Date_____

Missing Number Story Structure Asessment



Use words, pictures or numbers to show your answer.

1. The Ugly Duckling had some feathers.
   Then, he got 4 more.
   He had 10 feathers in all.
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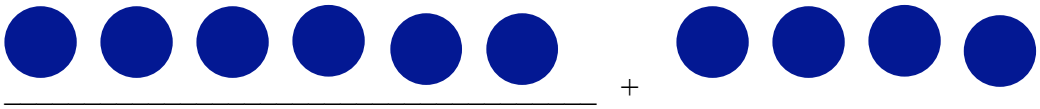


_____ +

I had 4 counters. I added counters until I had 10 counters. I added 6 counters.

6 + 4 = 10

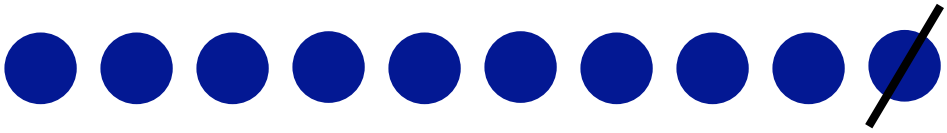
2. The elves made 3 shoes in the day.
   Next, they made some more at night.
   They made 6 shoes in all.
   How many shoes did they make at night?

+ _____

I had 3 counters. I added counters until I had 6. I added 3 counters.

3+ 3 = 6

3. The fisherman caught 10 fish.
   His wife ate 1 fish.
   How many fish do they have left?



I had 10 counters. I took 1 counter away. I had 9 counters left.

10 – 1 = 9

4. Puss got 7 boots.
   He gave away some boots.
   Now, Puss has 4 boots.
   How many did he give away?

I had 7 counters. I took away counters until I had 4 counters. I took away 3 counters.

7 – 3 = 4

5. Beauty bought some roses.
   She gave 1 to Beast.
   Now she has 6 roses.
   How many roses did she have to start with?

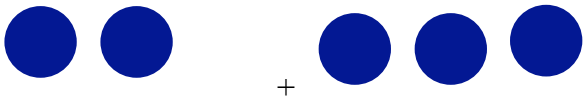
I had 1 counter. I added 6 counters to show the counters she gave the Beast. There were 7 counters to start with.

7 – 1 = 6

CHALLENGE: Write your own word problem with a missing number like the ones you have been learning to solve using the graphic organizer. Then, have a friend try to solve it!

Any word problem with a number missing at the start (beginning), change (middle), or result (end) that includes the other two parts of the number sentence is acceptable.

Beauty read some long books. Then, she read 3 short books. She read 5 books in all. How many long books did she read?



_____ +

I had 3 counters. Then I added some counters until I had 5. I added 2 counters.

$2 + 3 = 5$